ABSTRACT

EFFECT OF STORAGE TEMPERATURE AND TIME ON THE INFUSION OF DRIED PURPLE ROSELLE (*Hibiscus sabdariffa*) CALYXES ON THE INHIBITORY ACTIVITY *Escherichia coli* ATCC 8739 GROWTH

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One of beverages from traditional products often consumed by Indonesian is roselle (*Hibiscus sabdariffa*). Like other plants, flavonoid in roselle has an antibacterial activity that it's unstable and easily oxidized by temperature and time storage. The factor of product stability are quality, safety and effectiveness of a product. Parameters to determine product stability studies are physical, chemical, and microbiologicalogi properties. The objective of the study was to determine the stability of dried purple roselle (*Hibiscus sabdariffa*) calyxes infusion after storage at 10 ° C and -10 ° C for one week, two weeks, three weeks, four weeks, two months and three months. The methods of the study were antibacterial activity test using agar diffusion and *Escherichia coli* ATCC 8739 as a test bacterial.The stability of the infusion based on physical performance characteristic showed no changed of color, flavor, and odor after storage.. The results of the inhibitory activity the dried purple roselle calyxes infusion at 10°C for one week,two weeks,three weeks,four weeks,two months and three months againts *Escherichia coli* had inhibitory zone diameter were 16.30 ± 0.283 mm; 16.95 ± 1.344 mm; 16.49 ± 0.368 mm; 19.59 ± 0.014 mm; 16.26 ± 0.339 mm; 17.54±0.085 mm respectively and at -10° C had inhibitory zone diameter were 17.05 ± 0,636 mm ; 14.27 ± 0.021 mm; 13.30 ± 0.424 mm;13.18 ± 0.530 mm;13.13 ± 0.178 mm; 12.16 ± 0.156 mm respectively. The stability of infusion based on inhibitory activity after storage at 10°C and -10°C were four weeks and a week respectively.

Keywords : Stability, Infusion of Dried Purple Roselle *(Hibiscus sabdariffa)* Calyxes, Antibacterial Activity, *Escherichia coli* ATCC 8739